

GenCore version 4.5  
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OM nucleic - nucleic search, using sw model

Run on: October 28, 2000, 18:46:05 ; Search time 423.11 Seconds  
(without alignments)  
5830.493 Million cell updates/sec

Title: US-09-157-984-2

Perfect score: 399

Sequence: 1 aagcgcaacgactcttgcgca.....gccgcaactcatgagagcat 399

Scoring table: IDENTITY\_MUC  
Gapop 10.0 , Gapext 1.0

Number of hits satisfying chosen parameters: 14379728

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database :

EST:\*

1: gb\_est1:\*  
2: gb\_est2:\*  
3: gb\_est3:\*  
4: gb\_est4:\*  
5: gb\_est5:\*  
6: gb\_est6:\*  
7: gb\_est7:\*  
8: gb\_est8:\*  
9: gb\_est9:\*  
10: gb\_est10:\*  
11: gb\_est11:\*  
12: gb\_est12:\*  
13: gb\_est13:\*  
14: gb\_est14:\*  
15: gb\_est15:\*  
16: gb\_est16:\*  
17: gb\_est17:\*  
18: gb\_est18:\*  
19: gb\_est19:\*  
20: gb\_est20:\*  
21: gb\_est21:\*  
22: gb\_est22:\*  
23: gb\_est23:\*  
24: gb\_est24:\*  
25: gb\_est25:\*  
26: gb\_est26:\*  
27: gb\_est27:\*  
28: gb\_est28:\*  
29: gb\_est29:\*  
30: gb\_est30:\*  
31: gb\_est31:\*  
32: gb\_est32:\*  
33: gb\_est33:\*  
34: gb\_est34:\*  
35: gb\_est35:\*  
36: gb\_est36:\*  
37: gb\_est37:\*  
38: gb\_est38:\*  
39: gb\_est39:\*  
40: gb\_est40:\*  
41: em\_est40:\*  
42: em\_estfun:\*  
43: em\_esthum1:\*

44: em\_esthum2:\*  
45: em\_esthum3:\*  
46: em\_esthum4:\*  
47: em\_esthum5:\*  
48: em\_esthum6:\*  
49: em\_esthum7:\*  
50: em\_esthum8:\*  
51: em\_esthum9:\*  
52: em\_esthum10:\*  
53: em\_esthum11:\*  
54: em\_esthum12:\*  
55: em\_esthum13:\*  
56: em\_esthum14:\*  
57: em\_esthum15:\*  
58: em\_esthum16:\*  
59: em\_esthum17:\*  
60: em\_esthum18:\*  
61: em\_esthum19:\*  
62: em\_esthum20:\*  
63: em\_esthum21:\*  
64: em\_esthum22:\*  
65: em\_esthum23:\*  
66: em\_esthum24:\*  
67: em\_esthum25:\*  
68: em\_esthum26:\*  
69: em\_esthum27:\*  
70: em\_esthum28:\*  
71: em\_esthum29:\*  
72: em\_esthum30:\*  
73: em\_esthum31:\*  
74: em\_esthum32:\*  
75: em\_esthum33:\*  
76: em\_esthum34:\*  
77: em\_esthum35:\*  
78: em\_esthum36:\*  
79: em\_esthum37:\*  
80: em\_esthum38:\*  
81: em\_esthum39:\*  
82: em\_esthum40:\*  
83: em\_esthum41:\*  
84: em\_esthum42:\*  
85: em\_esthum43:\*  
86: em\_esthum44:\*  
87: em\_esthum45:\*  
88: gb\_gss1:\*  
89: gb\_gss2:\*  
90: gb\_gss3:\*  
91: gb\_gss4:\*  
92: gb\_gss5:\*  
93: gb\_gss6:\*  
94: gb\_gss7:\*  
95: gb\_gss8:\*  
96: gb\_gss9:\*  
97: gb\_gss10:\*  
98: gb\_gss11:\*  
99: gb\_gss12:\*  
100: gb\_gss13:\*  
101: gb\_gss14:\*  
102: gb\_gss15:\*  
103: gb\_gss16:\*  
104: gb\_gss17:\*  
105: gb\_gss18:\*  
106: gb\_gss19:\*  
107: gb\_gss20:\*  
108: gb\_gss21:\*  
109: gb\_gss22:\*  
110: gb\_gss23:\*  
111: gb\_gss24:\*  
112: gb\_gss25:\*  
113: gb\_gss26:\*  
114: gb\_gss27:\*  
115: gb\_gss28:\*  
116: gb\_gss29:\*

| LOCUS  | DEFINITION                           | ACCESSION | VERSION | KEYWORDS | SOURCE | ORGANISM |
|--|--------------------------------------|-----------|---------|----------|--------|----------|
| BE098020   | 540 bp mRNA                          |           |         |          |        |          |
| U1-R-C4-umc-d-09-0-U1 s1   | U1-R-C4 Rattus norvegicus cDNA clone |           |         |          |        |          |
| U1-R-C4-umc-d-09-0-U1 3'   | mRNA sequence.                       |           |         |          |        |          |
| BE098020   |                                      |           |         |          |        |          |
| BE098020.1   | GI:8488914                           |           |         |          |        |          |
| EST.   |                                      |           |         |          |        |          |
| Norway rat.  |                                      |           |         |          |        |          |
| Rattus norvegicus  |                                      |           |         |          |        |          |
| Eukaryote; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus |                                      |           |         |          |        |          |

REFERENCE  
AUTHORS  
TITLE

1 (bases 1 to 540)  
Bonaldi,M.F., Iannou,G. and Soares,M.B.  
Normalization and subtraction: two approaches to facilitate gene  
discovery

JOURNAL  
MEDLINE  
Genome Ras. 6 (9), 791-806 (1996,  
97044477".  
Contact: Soares, MB

| FEATURES                  | source | Location/Qualifiers  |
|---------------------------|--------|--|
| Query Match               | 23.8%  | Score 94.8; DB 33; Length 540;   |
| Best Local Similarity     | 57.6%  | Pred. No. 2,3e-18;   |
| Matches 220; Conservative | 0;     | Mismatches 117; Indels 45; Gaps 1;   |
| BASE COUNT                | 129 a  | 122 c 135 g 154 t  |
| ORIGIN                    |        | <p> TAG_L1B-UI-R-C4<br/> TAG_L1SSUE-spleen<br/> "TAG_SEQ=GAGA"<br/> 6:791-805, 1996)<br/> described (Bonaldo, Lennon and Soares, Genome Research<br/> retest.eng.uiowa.edu. Our web site at<br/> derived, please visit our procedure from which this clone was<br/> muscle, and 8, 12 and 18-day embryos. For a detailed<br/> description of the library from which this clone was<br/> adult lung, brain, liver, kidney, heart, spleen, ovary,<br/> derived from a mixture of tissues from rat placenta,<br/> library is a subtracted library of a series, ultimately<br/> polylinker; Site_1: Not I; Site_2: Eco RI; The UI-R-C4<br/> "/note="Vector: pT73D-Pac (Pharmacia) with a modified<br/> "/lab_host="DH10B (Life Technologies)"<br/> "/dev_stage="adult"<br/> "/clone_11b="UI-R-C4"<br/> "/clone_xref="UI-R-C4-anc-d-09-0-UI"<br/> "/db_xref="taxon:10116"<br/> "/strain="Sprague-Dawley"<br/> "/organism="Rattus norvegicus"<br/> 1.340<br/> Location/Qualifiers </p> |
| COMMENT                   |        | <p> Contact: Soares, MB<br/> Program for Rat Gene Discovery and Mapping<br/> University of Iowa<br/> 451 Eckstein Medical Research Building Iowa City, IA 52242, USA<br/> Tel: 319 335 8250<br/> Fax: 319 335 9565<br/> Email: msoares@blue.weeg.uiowa.edu<br/> The sequence contained an oligo-dT track that was present in the<br/> oligonucleotide that was used to prime the synthesis of first<br/> strand cDNA and therefore this may represent a bonafide poly A<br/> tail. The sequence tag present in the cDNA between the NotI site<br/> and the oligo-dT track served to identify it as a clone from the<br/> normalized spleen library cDNA library preparation: M.B. Soares Lab<br/> Clone distribution: clones will be available through Research<br/> Genetics (www.resgen.com)<br/> Seq primer: M13 Forward<br/> POLY=Yes. </p>  |

|                         |  |                 |  |            |             |  |
|-------------------------|--|-----------------|--|------------|-------------|--|
|                         | Query Match  | 22.4%           | Score 89.4;  | DB 35;     | Length 639; |  |
|                         | Best Local Similarity  | 56.3%           | Pred. No. 1e-16;   |            |             |  |
|                         | Matches 220;   | Conservative 0; | Mismatches 126;  | Indels 45; | Gaps 17;    |  |
|                         | OY   | 5               | ccaacgacttcttcacgcgcagcagtactctgtgtgtgaacagcgaaagacactggttg    | 64         |             |  |
|                         | Db   | 511             | CCCATGCCAATCTTCACAGGGGCGGAATTTCTGGGTGTGTGACAGTGTCAAGCGTGTTG    | 452        |             |  |
|                         | OY   | 65              | gcaacctgacccaagaaccagacttaacgagggaatgaagtaacggtgtgcacattgttc   | 124        |             |  |
|                         | Db   | 451             | GGGATGAGACACCGCCACAGACATCAAGGGCAGAAGAGTAGTGTGTGGAGAGGTGA       | 392        |             |  |
|                         | OY   | 125             | gcatacaaacatggtgtgaagaacagatggtctctaagacaacacgtgccgttgttgaaagc | 184        |             |  |
|                         | Db   | 391             | ACATTAAACAPCAGTGTATTCAACAAGTACTTTTGTGAACCAAGCCGGGACCATAATC     | 332        |             |  |
|                         | OY   | 185             | ccatcggggcccccaagccgggtcaagtagtcagcggcggttaaagcaggaaccttaagt   | 244        |             |  |
|                         | Db   | 331             | CCGTTGACACGG-----GGT   | 317        |             |  |
|                         | OY   | 245             | gtcgtggatcgacaacgacactggaactcttatgtcaccaactgacacactttgtgc      | 304        |             |  |
|                         | Db   | 316             | GCCGGGCGATGACTGCACAAGCACATGGAACCTATATTGACACGACATCACACTTTGTCA   | 257        |             |  |
|                         | OY   | 305             | ggcggttaacgctcctacaacaaacagatgcctcgtgaggtcatccgaatcaacgcgctt   | 364        |             |  |
|                         | Db   | 256             | AGGGCGTGAACCATGATGGATGGCAGAAGCGCTGCGCGGTTATCGGATAGTAGCGGCT     | 197        |             |  |
|                         | OY   | 365             | gcgtgtcgtctcctcagccgcgaacctatggag                              | 395        |             |  |
|                         | Db   | 196             | GTGTGTGTGTCTCAAGCAGAGAGGCTGTGAG                                | 166        |             |  |
| RESULT                  | 3  |                 |  |            |             |  |
| LOCUS                   | A1137043/c   |                 |  |            |             |  |
| DEFINITION              | A1137043   | 436 bp          | mRNA   | EST        | 05-JUN-1999 |  |
| ACCESSION               | U1-R-C2F-oj-c-01-0-U1.s1   |                 |  |            |             |  |
| VERSION                 | U1-R-C2F-oj-c-01-0-U1  | 3'              |  |            |             |  |
| KEYWORDS                | A1137043   |                 |  |            |             |  |
| SOURCE                  | A1137043.1   | GI:3637820      |  |            |             |  |
| ORGANISM                | Norway rat.  |                 |  |            |             |  |
|                         | Rattus norvegicus  |                 |  |            |             |  |
|                         | Eukaryote; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;          |                 |  |            |             |  |
|                         | Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;              |                 |  |            |             |  |
|                         | Rattus.  |                 |  |            |             |  |
| REFERENCE               | 1 (bases 1 to 436)   |                 |  |            |             |  |
| AUTHORS                 | Bonaldo,M.F., Lennon,G. and Soares,M.B.                                    |                 |  |            |             |  |
| TITLE                   | Normalization and subtraction: two approaches to facilitate gene discovery |                 |  |            |             |  |
| JOURNAL MEDLINE COMMENT | Genome Res. 6 (9), 791-806 (1996)  |                 |  |            |             |  |
|                         | Contact: Soares, MB  |                 |  |            |             |  |
|                         | Program for Rat Gene Discovery and Mapping                                 |                 |  |            |             |  |
|                         | University of Iowa   |                 |  |            |             |  |
|                         | 451 Eckstein Medical Research Building Iowa City, IA 52242, USA            |                 |  |            |             |  |
|                         | Tel: 319 335 8250  |                 |  |            |             |  |
|                         | Fax: 319 335 9565  |                 |  |            |             |  |
|                         | Email: mssoares@blue.weeg.uiowa.edu  |                 |  |            |             |  |
|                         | The sequence tag present in the CDNA between the NotI site and the         |                 |  |            |             |  |
|                         | oligo-dr track served to identify it as a clone from the normalized        |                 |  |            |             |  |
|                         | adult 12-Day-Embryo Library. CDNA Library Preparation: M. Fatima           |                 |  |            |             |  |
|                         | Bonaldo, Ph.D. Clone distribution: clones will be available through the    |                 |  |            |             |  |
|                         | Research Genetics This clone is also available through the                 |                 |  |            |             |  |
|                         | I.M.A.G.E. Consortium at LNL (infoimage.lnl.gov). IMAGE                    |                 |  |            |             |  |
|                         | ID=1787550 The following repetitive elements were found in this            |                 |  |            |             |  |
|                         | CDNA sequence: I-61, >AT_riehLow_complexity                                |                 |  |            |             |  |
|                         | Seq primer: M13 Forward  |                 |  |            |             |  |
|                         | POLYA=No.  |                 |  |            |             |  |
| FEATURES                | Location/Qualifiers  |                 |  |            |             |  |
| SOURCE                  | 1..436   |                 |  |            |             |  |
|                         | /organism="Rattus norvegicus"  |                 |  |            |             |  |
|                         | /strain="Sprague-Dawley"   |                 |  |            |             |  |

```

/db_xref="taxon:10116"
/clone="UI-R-C2p-01-c-01-0-01"
/clone_lib="UI-R-C2p"
/der_stage="adult"
/lab_host="DH10B (Life Technologies)"
/notes="Vector: pRT3D-Pac (Pharmacia) with a modified
polylinker; Site_1: Not I; Site_2: Eco RI; The UI-R-C2p
library is a subtracted library derived from the UI-R-C1
library, which is a subtracted library derived from the
UI-R-C0 library. The UI-R-C0 library consisted of a
mixture of individually tagged normalized libraries
constructed from rat placenta, adult lung, brain, liver,
kidney, heart, spleen, ovary, muscle, 8, 12 and 18-day
embryo. The tag is a string of 3-5 nucleotides present
between the Not I site and the oligo-dT track which allows
identification of the library of origin of a clone within
the mixture. The subtracted library (UI-R-C2p) was
constructed as follows: PCR amplified cDNA inserts from
UI-R-C1 clones from which 3' ESTs had been derived was
used as a driver in a hybridization with the UI-R-C1
library in the form of single-stranded circles. The
remaining single-stranded circle (subtracted library) was
purified by hydroxyapatite column chromatography,
converted to double-stranded circles and electroporated
into DH10B bacteria (Life Technologies) to generate the
UI-R-C2p library. This procedure has been previously
described (Bonaldo, Lennon and Soares, Genome Research 6:
791-806, 1996)."

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Consortium DNA Sequencing by: Washington University Genome
Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LNL, send email to:
info@image.lnl.gov
Seq primer: -40UP from Gbco
High quality sequence stop: 418.

FEATURES
    source
        1..512
            /organism="Homo sapiens"
            /db_xref="taxon:9606"
            /clone="IMAGE:3026952"
            /clone_1b="NCI-CGAP-C017"
            /tissue_type="juvenile granulosa tumor"
            /lab_host="DH10B"
            /note="Organ: colon; Vector: PCMV-SPORE; Site_1: Salt;
            Site_2: Notti; Cloned unidirectionally. Primer: oligo dr.
            Library constructed by Life Technologies."
BASE COUNT      134 a      125 c      124 g      128 t      1 others
ORIGIN
Query Match      17.98; Score 71.6; DB 24; Length 512;
Best Local Similarity 55.58; Pred. NO. 2.5e-11;
Matches 213; Conservative 0; Mismatches 124; Indels 47; Gaps 2;
0Y      12 cttcttcacatcgccgcgaagtactctgtgtgtgtgacacgcgaagacactggttgcacact 71
         1111111111111111111111111111111111111111111111111111111111111111
Db      499 CATCTTCACACAGGGGCGAATTCTCGGTGTGACACAGTG--TCACGCTGGGGTGGGATTA 442

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|            |   |   |                          |             |
|------------|---|---|--------------------------|-------------|
| LOCUS      | AW770784  | 512 bp                                      | EST                      | 04-MAY-2000 |
| DEFINITION | AW770784  | homo sapiens                                | CDNA clone IMAGE:3026952 | 3'          |
|            | similar to gb:X52599  | BETA-NERVE GROWTH FACTOR PRECURSOR (HUMAN); | mRNA sequence.           |             |
| ACCESSION  | AW770784  |   |                          |             |
| VERSION    | AW770784.1  | GI:7702831                                  |                          |             |
| KEYWORDS   | EST.  |   |                          |             |
| SOURCE     | human.  |   |                          |             |
| ORGANISM   | Homo sapiens  |   |                          |             |
|            | Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;     |   |                          |             |
|            | Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.             |   |                          |             |
| REFERENCE  | NCI-CGAP  | http://www.ncbi.nlm.nih.gov/ncicgap.        |                          |             |
| AUTHORS    | 1 (bases 1 to 512)  |   |                          |             |
| TITLE      | National Cancer Institute, Cancer Genome Anatomy Project (CGAP),      |   |                          |             |
|            | Tumor Gene Index  |   |                          |             |
| JOURNAL    | Unpublished (1997)  |   |                          |             |
| COMMENT    | Contact: Robert Strausberg, Ph.D.                                     |   |                          |             |
|            | tel: (301) 496-1550   |   |                          |             |
|            | Email: Robert.Strausberg@nih.gov                                      |   |                          |             |
|            | Tissue Procurement: Chris Morkauk, M.D., Ph.D., Michael R.            |   |                          |             |
|            | Emmett-Buck, M.D., Ph.D. CDNA Library Preparation: Life Technologies, |   |                          |             |
|            | Inc. CDNA Library Arrayed by: Christa Prange, The I.M.A.G.E.          |   |                          |             |

|            |  |                                      |   |              |             |               |   |
|------------|--|--------------------------------------|---|--------------|-------------|---------------|---|
| RESULT     | 5  |                                      |   |              |             |               |   |
| LOCUS      | BE045524/c   |                                      |   |              |             |               |   |
| DEFINITION | BE045524   | 442 bp                               | mRNA  | EST          | 08-JUN-2000 |               |   |
|            | bh23c08.x1   | NCI-CGAP                             | Luz2  | Homo sapiens | CDNA        | IMAGE:2955926 | 3 |
|            | similar to gb:   | AF52599                              | BETA-NERVE GROWTH FACTOR PRECURSOR (HUMAN); |              |             |               |   |
|            | mRNA sequence.   |                                      |   |              |             |               |   |
| ACCESSION  | BE045524   |                                      |   |              |             |               |   |
| VERSION    | BE045524.1   | GI:8362577                           |   |              |             |               |   |
| KEYWORDS   | EST.   |                                      |   |              |             |               |   |
| SOURCE     | human,   |                                      |   |              |             |               |   |
| ORGANISM   | Homo sap.:ens  |                                      |   |              |             |               |   |
|            | Eukaryotic; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; |                                      |   |              |             |               |   |
|            | Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.          |                                      |   |              |             |               |   |
| REFERENCE  | 1 (bases 1 to 442)   |                                      |   |              |             |               |   |
| AUTHORS    | NCI-CGAP   | http://www.ncbi.nlm.nih.gov/ncicgap. |   |              |             |               |   |
| TITLE      | National Cancer Institute, Cancer Genome Project (CGAP),           |                                      |   |              |             |               |   |
| JOURNAL    | Tumor Gene Index   |                                      |   |              |             |               |   |
|            | Unpublished (1997)   |                                      |   |              |             |               |   |

Contact: Robert Strausberg, Ph.D.  
Tel: 703-405-1750

## FEATURES

Location/Qualifiers  
1. .442

```

"organism":"Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:2955926"
/clone_lib="NCI_CGAP_Lu24"
/tissue_type="carcinoid"
/lab_host="DH10B"
/name="Organ: lung; Vector: pT7AD-Pac (Pharmacia) with a
modified polylinker; Plasmid DNA from the normalised
library NCI_CGAP_Lu5 was prepared, and ss circles were
made in vitro. Following HAP purification, this DNA was
used as tracer in a subtractive hybridization reaction.
The driver was PCR-amplified cDNAs from a pool of 5,000
clones made from the same library (cloneids
141920-1417991 and 1520904-1522339). Subtraction by Bencic
Soares and M. Fatima Ronaldo."

```

113 a 104 c 107 g 118 t

|                           |        |                    |           |             |
|---------------------------|--------|--------------------|-----------|-------------|
| Query Match               | 17.7%  | Score 70.8;        | DB 33;    | Length 442; |
| Best Local Similarity     | 66.2%; | Pred. No. 4.3e-11; |           |             |
| Matches 102; Conservative | 0;     | Mismatches 52;     | Indels 0; | Gaps 0;     |

|    |     |   |     |
|----|-----|---|-----|
| OY | 242 | gctctcgtggatcgacaacagcacttgaaccttatctgcaccaacgctgcacaccttg          | 301 |
|    |     |   |     |
| Dδ | 321 | ggtccgggggatattgactcaaaagcacctggaactcatattttgaccacgacttcacacctttg   | 262 |
|    |     |   |     |
| OY | 302 | tgcggcgcttaacgttcctacaaaaacagatgcccttggaggltcatccgaatacaagccg       | 361 |
|    |     |   |     |
| Dδ | 261 | tcaaagccgctcaccatcgatggatggcaagcagcgtctgcctgcggctttatccggaatagatagg | 202 |
|    |     |   |     |
| OY | 362 | cgtgcgctgtgtcctcagccgcgcaactcatgtgag                                | 395 |
|    |     |   |     |
|    | 201 | ccctctgttgtgtctcagcagaagcgtgttgag                                   | 168 |

|            |   |
|------------|---|
| RESULT     | 6   |
| AI341450/c |   |
| LOCUS      |   |
| DEFINITION | AI341450 453 bp mRNA<br>X91104.x1 NCI-GAR-G6 Homo sapiens cDNA clone IMAGE:200911.3,<br>similar to gb:X52559 BETA-NERVE GROWTH FACTOR PRECURSOR (HUMAN);, |
| ACCESSION  | mRNA sequence.  |
| VERSION    | AI341450  |
| KEYWORDS   | AI341450.1 GI:4078377   |
| SOURCE     | EST.  |
| ORGANISM   | human.<br>Homo sapiens  |

Unpublished (1997)  
Contact: Robert Strausberg, Ph.D

Tel: (301) 496-1550  
Email: Robert.Strausberg@nih.gov  
Tissue Procurement: Christopher A. Moskaluk, M.D., Ph.D., Michael  
R. Emmert-Buck, M.D., Ph.D.

## FEATURES

cDNA library Preparation: M. Bento Soares, Ph.D., M. Fatima  
 Bonaldo, Ph.D.  
 cDNA library Arrayed by: Greg Lennon, Ph.D.  
 DNA Sequencing by: Washington University Genome Sequencing Center  
 Clone distribution: NC1-CGAP clone distribution information can be  
 found through the I.M.A.G.E. Consortium/LLNL at:  
[www.bio.llnl.gov/dbp/lsimage/image.html](http://www.bio.llnl.gov/dbp/lsimage/image.html)  
 Insert length: 553      Std Error: 0.00  
 Seq primer: -40UP from Gibco  
 High quality sequence stop: 312.

Location/Qualifiers  
1. .453

/organism="Homo sapiens"  
 /db\_xref="taxon:9606"  
 /clone="IMAGE:2009911"  
 /clone\_1lb="NCI-CGAP-GC6"  
 /tissue\_type="pooled\_germ\_cell\_tumors"  
 /lab\_host="DH10B"  
 /note="vector: pT7T3D-Pac (Pharmacia) with a modified  
 polylinker. Plasmid DNA from the normalized library  
 NCI CGAP GC4 was prepared, and ss circles were made in  
 vitro. Following HAP purification, this DNA was used as  
 tracer in a subtractive hybridization reaction. The driver  
 was PCR-amplified cDNAs from a pool of 5,000 clones made  
 from the same library (cloneIDs 1257096-1258631,  
 1469064-1470983, and 1475592-1476743). Subtraction by  
 Bento Soares and M. Fatima Bonaldo."

118 a 101 c 111 g 123 f

|                           |        |                    |           |             |
|---------------------------|--------|--------------------|-----------|-------------|
| Query Match               | 17.7%; | Score 70.8;        | DB 10;    | length 453; |
| Best Local Similarity     | 66.2%; | Pred. No. 4.3e-11; |           |             |
| Matches 102; Conservative | 0;     | Mismatches 52;     | Indels 0; | Gaps 0;     |

|    |     |   |     |
|----|-----|---|-----|
| OY | 242 | gctgtcgttgagatcgacaacgagcacttggaaaccttatatgcaccaacgtgcacaccttg  | 301 |
|    |     |   |     |
| Dδ | 321 | GGTGCAGGCGCATTTGACTCACAAGCACATGGAACCTATTGTTHAACACGACATCAACCTTTG | 262 |
| OY | 302 | tgcgggcgttaacgttcctcaaaaaaccagaattgcctggaggttcatccgaatacaagccg  | 361 |
|    |     |   |     |
| Dδ | 261 | TCAAAGGGCGCTACCATGGATGGATGGCAAGCAGGGCTGCCGTTCATCCGGATAGATAACGG  | 202 |
| OY | 362 | cttgacgttgtgtcctcaagccgcaactatgtgag                             | 395 |
|    |     |   |     |
| Dδ | 201 | CCTGTGTGTGTGTCTCAGCAGGAAGGCTGTGAG                               | 168 |

|            |  |              |             |
|------------|--|--------------|-------------|
| RESULT     | 7  |              |             |
| LOCUS      | A1700604/c   |              |             |
| DEFINITION | A1700604. 442 bp mRNA  |              |             |
|            | w388d10.x1 NCI CGAP Lu24 Homo sapiens                            | EST          | 18-DEC-1999 |
|            | similar to gb:X5259 BETA-NERVE GROWTH FACTOR PRECURSOR (HUMAN);, | IMAGE:234379 | 3'          |
|            | mRNA sequence.   |              |             |
| ACCESSION  | A1700604   |              |             |
| VERSION    | A1700604.1   | GI:4988504   |             |
| KEYWORDS   | EST.   |              |             |
| SOURCE     | human.   |              |             |
| ORGANISM   | Homo sapiens   |              |             |

Unpublished (1997)  
Contact: Robert Strausberg, Ph.D  
Tel.: (301) 495-1550

tel: (301) 496-1350  
Email: Robert.Strausberg@nih.gov  
Tissue Procurement: Christopher Moskalko, M.D., Ph.D., Michael R.  
Emmert-Buck, M.D., Ph.D.  
CDNA Library Preparation: M. Bento Soares, Ph.D.  
CDNA Library Arrayed by: Greg Lennon, Ph.D.



ACCESSION AA928118

1 (bases 1 to 416)  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo; Sapiens; Homo sapiens

| RESULT     | 11  |
|------------|---|
| AM086159/c |   |
| LOCUS      | AM086159 416 bp mRNA EST 14-OCT-1999  |
| DEFINITION | xc77611.x1 NCI-GAP Ov32 Homo sapiens cDNA clone IMAGE:2590292 3' similar to gb.X52599 BETA-NERVE GROWTH FACTOR PRECURSOR (HUMAN);, mRNA sequence. |
| ACCESSION  | AM086159  |
| VERSION    | AM086159.1 GI:6041233   |
| KEYWORDS   | EST.  |
| SOURCE     | human.  |
| ORGANISM   | Homo sapiens  |
| REFERENCE  | Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo. 1 (bases 1 to 416)  |





| BASE COUNT | ORIGIN |
|------------|--------|
| 128 a      | 105 c  |
|            | 111 g  |
|            | 151 t  |

| LOCUS    | DEFINITION                                    | EST         | CDNA |
|----------|---|-------------|------|
| 146522   |   | 11-OCT-1996 |      |
| W46522   | 455 bp mRNA                                   |             |      |
|          | cg32304.r1 Soares_senescent_fibroblasts_NDHSF |             |      |
|          | clone IMAGE:324054 5' similar to gb:K52599    |             |      |
|          | PBCPUSOR (HUMAN); mRNA sequence.              |             |      |
| W46522   | BETA-NERVE GROWTH FACTOR                      |             |      |
| W46522.1 | GI:1331151                                    |             |      |
| EST.     |   |             |      |
| SOURCE   | human.  |             |      |
| ORGANISM | Homo sapiens                                  |             |      |

ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
1 (bases 1 to 455)  
Hallier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Holman  
, M., Hultman, M., Kucabada, T., Le, M., Lennon, G., Marra, M., Parsons, J.,  
Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Trevasakis, E., Waterston  
, R., Williamson, A., Wohlmann, P. and Wilson, R.

**TITLE** The MasfU-Merck EST Project  
**JOURNAL** Unpublished (1993)  
**COMMENT** Contact: Wilson RK  
 Washington University School of Medicine  
 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108  
 Tel: 314 286 1800  
 Fax: 314 286 1810  
 Email: est@watson.wustl.edu  
 This clone is available royalty-free through LLNL; contact the  
 IMAGE Consortium (info@image.llnl.gov) for further information.  
 Insert length: 707 Std Error: 0.00  
 Seq primer: mob.REGA+ET  
 High quality sequence stop: 417.

```

FEATURES
source
location/Qualifiers
1..455
/organism="Homo sapiens"
/db_xref="GDB:125556"
/db_xref="taxon:9606"
/clone_id="IMAGE:324054"
/clone_lib="Soares_senescent_fibroblasts_NbHSF"
/tissue_type="senescent fibroblast"
/lab_host="PH10B (ampicillin resistant)"
/notes="Vector: pT73D (Pharmacia) with a modified
polylinker V.TYPE: phagemid; Site_1: Not I; Site_2: Eco RI
: 1st strand cDNA was primed with a Not I - oligo(dT)
primer 15',
TGTTCACATCTGAGCTGGAGCGGCCGCGCATTTTTTTTTTTTTTTT 3'),
double-stranded cDNA was size selected, ligated to Eco RI
adapters (Pharmacia), digested with Not I and cloned into
the Not I and Eco RI sites of a modified pT73 vector
(Pharmacia). Library went through one round of
normalization to a Cot = 5. Library constructed by Bento
Soares and M.Fatima Bonaldo."
BASE COUNT
115 a 114 c 130 g 93 t 3 others
ORIGIN

```

| Query Match | Best Local Similarity | Score   | DB #   | Length      |
|-------------|-----------------------|---|--------|-------------|
| Matches     | 92                    | Conservative  | 0      | No. Matches |
|             |                       | 60.1%   | Pred.  | 0.0013      |
|             |                       |   | Indels | 1           |
|             |                       |   | Gaps   | 1           |
| QY          | 58                    | tgaggttgcaacacccaggaagccacagacttacgggcaatgaagtcaagtcgtctgcga  | 117    |             |
|             |                       |   |        |             |
| Db          | 220                   | TGGGTGGGGATATAGACACACCGCCACACATCAAGGCCAAGAGATGTTGTTGGGA       | 279    |             |
| QY          | 118                   | catgttcgcacatcaacaacgtygtgtaagaagaagatg-cttcagagacacgctgcgtyt | 176    |             |
|             |                       |   |        |             |
| Db          | 280                   | GAGGTGACATTTAAACAACAGTGTATTCAAACAAGACTTTTTAGACACAGTGGCTTGA    | 339    |             |
| QY          | 177                   | gtcgaagcccatcgsgggcccccaagcgggtyca                            | 209    |             |
|             |                       |   |        |             |
| Db          | 340                   | CCCAATCCGTTTGACACGNCGTNCCGGGGCA                               | 372    |             |

| RESULT 15 | TS2484/c | LOCUS  | DEFINITION                        | ACCESSION | VERSION | KEYWORDS | SOURCE | ORGANISM |
|-----------|----------|--|-----------------------------------|-----------|---------|----------|--------|----------|
|           |          | TS2484   | 463 bp mRNA                       |           |         |          |        |          |
|           |          | y32d03.s1  | Stratagene fetal spleen (#937205) |           |         |          |        |          |
|           |          | clone IMAGE:72869.3  | similar to similar to gb:552599   |           |         |          |        |          |
|           |          | GROWTH FACTOR PEPCURSOR (HUMAN)  | mRNA sequence.                    |           |         |          |        |          |
|           |          | TS2484   |                                   |           |         |          |        |          |
|           |          | TS2484.1   | GI:654344                         |           |         |          |        |          |
|           |          | EST.   |                                   |           |         |          |        |          |
|           |          | human.   |                                   |           |         |          |        |          |
|           |          | Homo sapiens   |                                   |           |         |          |        |          |
|           |          | Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;          |                                   |           |         |          |        |          |
|           |          | Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.                  |                                   |           |         |          |        |          |
|           |          | 1 (bases 1 to 463)   |                                   |           |         |          |        |          |
|           |          | Hillier, L., Lennon, G., Becker, M., Bonaldo, M.F., Chiappelli, B.,        |                                   |           |         |          |        |          |
|           |          | Chissoe, S., Dietrich, N., Dubuque, T., Favell, A., Gish, W., Hawkins      |                                   |           |         |          |        |          |
|           |          | , M., Hultman, M., Kucaba, T., Lacy, M., Le, M., Le, N., Mardis, E., Moore |                                   |           |         |          |        |          |
|           |          | , B., Morris, M., Parsons, J., Prange, C., Rifkind, R., Roeding, T.,       |                                   |           |         |          |        |          |
|           |          | Schellenberg, K., Soares, M.B., Tan, F., Thierry-Mieg, J., Trevisks, E.,   |                                   |           |         |          |        |          |

Mon Oct 30 10:20:14 2000

us-09-157-984-2.rst

Page 10

TITLE Underwood, K., Wohlmann, P., Waterston, R., Wilson, R. and Marra, M.  
JOURNAL Generation and analysis of 280,000 human expressed sequence tags  
MEDLINE Genome Res. 6 (9), 807-828 (1996)  
COMMENT 97044478

Contact: Wilson RK  
Washington University School of Medicine  
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108  
Tel: 314 286 1800  
Fax: 314 286 1810  
Email: estewatson.wustl.edu  
Insert Size: 935  
High quality sequence stops: 267 Source: IMAGE Consortium, LINT This  
clone is available royalty-free through LINT; contact the IMAGE  
Consortium (info@image.lnl.gov) for further information.  
Insert Length: 935 Std Error: 0.00  
Seq primer: -21ml3  
High quality sequence stop: 267.  
Location/Qualifiers

#### FEATURES

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1. .463  
/organism="Homo sapiens"  
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/clone="IMAGE:72869"  
/clone\_lib="Stratagene fetal spleen (#937205)"  
/tissue\_type="fetal spleen"  
/dev\_stage="fetal"  
/lab\_host="SOLR cells (kanamycin resistant)"  
/note="Organ: spleen; Vector: pBluescriptSK-; Site: 1;  
ECORI; Site: 2; XhoI; Cloned unidirectionally; Primer:  
0.110 dt. Pooled spleens. Average insert size: 1.0 kb;  
Uni-ZAP XR Vector; -5' adaptor sequence: 5' GAATTCGCGCAG  
3' -3' adaptor sequence: 3' CTCGAGTCTTTTCTTTTCTTTT 3' "

#### BASE COUNT

113 a 104 c 111 g 130 t 5 others

#### ORIGIN

Query Match 11.4%; Score 45.4; DB 39; Length 463;  
Best Local Similarity 68.1%; Pred No 0.0023;  
Matches 92; Conservative 0; Mismatches 41; Indels 2; Gaps 2;  
QY 263 agcacttgaaactcttatggcccaag-tgacacgcttggcgggcg-ttaagtccta 320  
DB 297 AGCACTGAACTCATATTGTACCCAGACTCACACCTTTGTCAAGCGCTGACCATGGA 238  
QY 321 caaaacagattgcctggaggtatccgaatcaagcgcgcttgatgctcctcag 380  
DB 237 TGGCAAGCAGGCTGCGCTGTATCCGATAGATACGCGCTGTGTGTGCTCAG 178  
QY 381 ccgaactcatgag 395  
DB 177 CAGCAAGCTGTGAG 163

Search completed: October 28, 2000, 20:30:08  
Job time: 6243 sec